

FIVE-YEAR BS MATH/MS MATH FINANCE

<http://www.math.miami.edu/>

The BS/MSMF program is a five-year program combining the Probability/Statistics track of the Mathematics undergraduate major with the graduate coursework required for the MS in Mathematical Finance degree. For undergraduates seeking careers in the fields of economics, finance and data science, the BS/MSMF degree offers the appropriate training sought by companies worldwide. Students can achieve the required academic credentials in five years due to the integrated and focused nature of the BS/MSMF degree.

Course	Title	Credit Hours
Freshman Year		
Fall		
MTH 161	Calculus I	4
ENG 105	English Composition I	3
Other		9
	Credit Hours	16
Spring		
MTH 162	Calculus II	4
ENG 106	English Composition II	3
Other		9
	Credit Hours	16
Sophomore Year		
Fall		
MTH 210	Introduction to Linear Algebra	3
MTH 224	Introduction to Probability and Statistics	3
Other		9
	Credit Hours	15
Spring		
MTH 230	Introduction to Abstract Mathematics	3
MTH 310	Multivariable Calculus	3
Other		9
	Credit Hours	15
Junior Year		
Fall		
MTH 542	Statistical Analysis	3
MTH 433	Advanced Calculus	3
Other		9
	Credit Hours	15
Spring		
MTH 311	Introduction to Ordinary Differential Equations	3
MTH 461	Survey of Modern Algebra	3
Other		9
	Credit Hours	15
Senior Year		
Fall		
MTH 524	Introduction to Probability	3
MTH 547	Introduction to Mathematical Finance	3
Other		9
	Credit Hours	15
Spring		
MTH 525	Introduction to Mathematical Statistics	3
MTH 320	Introduction to Numerical Analysis (recommended)	3

Other		7
	Credit Hours	13
Fifth Year (Graduate)		
Fall		
MTH 645	Optimization Methods	3
MTH 649	Computational Methods of Finance	3
MTH 613	Partial Differential Equations I	3
FIN 650	Financial Investment	2
	Credit Hours	11
Spring		
MTH 643	Statistical Analysis II with Financial Applications	3
MTH 648	Stochastic Calculus with Application to Finance	3
FIN 651	Advanced Topics in Investments	2
FIN 653	Alternative Investments (or other Finance elective)	2
MTH/CSC elective		3
	Credit Hours	13
Summer		
MSMF Thesis/Project		6
	Credit Hours	6
	Total Credit Hours	150